

**Notice of Allowability**

Application No.

10/719,778

Applicant(s)

CARTER, JEFFREY

Examiner

Vikansha S. Dwivedi

Art Unit

3746

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/6/2005.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 11/21/06, 9/6/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



**ANTHONY D. STASHICK  
PRIMARY EXAMINER**

## **DETAILED ACTION**

### ***Priority***

The priority claimed for the application has been acknowledged.

### ***Information Disclosure Statement***

Applicant Information Disclosure Statement submitted on 11/21/2003 and 9/6/2005 are acknowledged. Since the submission complies with 37CFR 1.97 and 1.98 the references listed therein have been considered. Initialed and dated copies of Applicant's IDS forms 1449 are attached to the instant Office action.

### ***Allowable Subject Matter***

Claims 1-23 are allowed.

### ***Reasons for Allowable***

The prior art neither discloses nor makes obvious the combination set forth in the claims by not disclosing variable geometry turbocharger comprising:

a turbine wheel mounted within a turbine housing on one end of a turbocharger shaft for rotation about a turbocharger axis, the turbine housing defining an annular turbine inlet around the turbine wheel;

a compressor wheel mounted within a compressor housing on the other end of said turbocharger shaft for rotation with the turbine wheel about said axis;

turbocharger shaft bearing assemblies located within a bearing housing connected between the turbine housing and the compressor housing;

a variable geometry mechanism for varying the size of the annular turbine inlet;

and an electric motor for actuating the variable geometry mechanism;

wherein the electric motor is a tubular linear electric motor comprising a fixed annular stator ring and an axially moveable annular forcer ring, arranged coaxially about said turbocharger axis with movement of the forcer ring effecting adjustment of the variable geometry mechanism.


Prior art discloses variable geometry turbocharger comprising: a turbine wheel mounted within a turbine housing on one end of a turbocharger shaft for rotation about a turbocharger axis, the turbine housing defining an annular turbine inlet around the turbine wheel; a compressor wheel mounted within a compressor housing on the other end of said turbocharger shaft for rotation with the turbine wheel about said axis; turbocharger shaft bearing assemblies located within a bearing housing connected between the turbine housing and the compressor housing; a variable geometry mechanism for varying the size of the annular turbine inlet; and an electric motor for actuating the variable geometry mechanism. Prior art of record as noted by the examiner in the Notice of Reference discloses all these features and these features are known in the art. Prior art does not disclose an electric motor where the motor is a tubular linear electric motor comprising a fixed annular stator ring and an axially moveable annular forcer ring, arranged coaxially about said turbocharger axis with movement of the forcer ring effecting adjustment of the variable geometry mechanism. It would not have been obvious to change the transient actuators into linear electric motor that is axially movable. To have an axially movable motor in the art of variable geometry inlet passageway for, variable geometry turbines, to optimize gas flow velocities is an inventive concept.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikansha S. Dwivedi whose telephone number is 571-272-7834. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
VSD

  
ANTHONY D. STASHICK  
PRIMARY EXAMINER